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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/556,015	11/08/2005	Roland Koch	2003P06530WOUS	2920
22116 7590 03/16/2007 SIEMENS CORPORATION INTELLECTUAL PROPERTY DEPARTMENT 170 WOOD AVENUE SOUTH ISELIN, NJ 08830			EXAMINER NGUYEN, VINCENT Q	
			ART UNIT 2858	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE 3 MONTHS		MAIL DATE 03/16/2007	DELIVERY MODE PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No. 10/556,015	Applicant(s) KOCH ET AL.	
	Examiner Vincent Q. Nguyen	Art Unit 2858	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_\_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 22-42 is/are pending in the application.
- 4a) Of the above claim(s) 30-42 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 22 and 25-29 is/are rejected.
- 7) ☒ Claim(s) 23 and 24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 November 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I. Claims 22-29, drawn to a measuring device for locating a partial discharge on a conductor bar, classified in class 324, subclass 536.

Group II. Claims 30-41, drawn to a sensor for determine of partial discharges, classified in class 324, subclass 515.

Group III. Claim 42, drawn to a method for detecting and locating a partial discharge in a conductor bar, classified in class 324, subclass 512.

2. The inventions listed as Groups I-III do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because all of the limitations such as

coaxial cables formed as connections arranged on the electrode are not found in Group I. The subcombination has separate utility such as coaxial cables can be used as antenna to transmit and to receive signals.

The examiner has required restriction between combination and subcombination inventions. Where applicant elects a subcombination, and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

Inventions III and (I, II) are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the method as claimed can be practiced by hand.

Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.

During a telephone conversation with John P. Musone on 2/22/2007 a provisional election was made without traverse to prosecute the invention of Group I, claims 22-29. Affirmation of this election must be made by applicant in replying to this Office action. Claims 30-42 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

### ***Drawings***

The drawings are objected to because in figure 11, elements 45 and 46 should be labeled:

- Time Different Module -- and
- Calculation Module -- respectively

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 22, 25, are rejected under 35 U.S.C. 103(a) as being unpatentable over Maureira (5,416,418).

With respect to claims 22, 25, Maureira et al. discloses a measuring device comprising a first sensor (20) that is designed to detect signals that are caused by the partial discharge and propagating along the conductor (2) with the first sensor being designed to emit a first partial discharge output signal that reflects a first detection time and is applied to the first sensor; and a second sensor (30) that is designed to detect signals that are caused by the partial discharge and propagating along the conductor with the second sensor being designed to emit a second partial discharge output signal that reflects a second detection time and is applied to the second sensor and the second sensor arranged at a distance from the first sensor on the conductor, whereby the first partial discharge output signal and the second partial discharge output signal are supplied to an evaluation unit which is designed to locate the partial discharge on the conductor.

The only difference between Maureira et al. and the invention claimed is that the claim recites a conductor bar in place of the conductor cable (Element 2 of Maureira).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the system of Maureira to be used in the conductor bar because detecting partial discharge on the cable or on the conductor bar would not change the function of the system of Maureira.

With respect to claims 28 and 29, Maureira

5. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maureira (5,416,418) in view of Eriksson et al. (5,903,158).

With respect to claim 26, Maureira does not disclose the first and the second sensor is an inductively acting sensor.

Eriksson et al. discloses a system similar to that of Maureira and further discloses inductive acting sensor (Element 6).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the inductive sensor as taught by Eriksson et al. into the system of Maureira because alternatively using capacitive or inductive sensor to detect partial discharge is typical in the art.

6. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maureira (5,416,418) in view of Schweitzer (4,550,288).

With respect to claim 27, Maureira discloses every subject matter recites in the claim except for the first or the second sensor is a direct-axis voltage sensor.

Schweitzer discloses a system for detecting voltage loss and further discloses a voltage loss sensor (Figures 1 and 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the sensor as taught by Schweitzer into the system of Maureira because using alternatively using capacitive, inductive or voltage sensor to detect partial discharge is typical in the art.

7. Claims 28, 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maureira (5,416,418) in view of Campbell (4,949,001).

With respect to claims 28 and 29, Maureira does not disclose the sensor is arranged to be used in a generator or in a transformer.

Campbell discloses a system similar to that of Maureira and further discloses the sensor is arranged to use in the generator or transformer (Figures 1-4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the sensor as taught by Campbell into the system of Maureira because using the sensor to detect the partial discharge in a cable or in the generator or in the transformer the function of sensor does not change.

***Allowable Subject Matter***

8. Claims 23-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

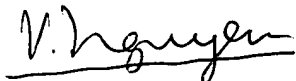


**Contact Information**

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vincent Q. Nguyen whose telephone number is (571) 272-2234. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Vincent Q. Nguyen  
Primary Examiner  
Art Unit 2858

March 12, 2007